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Data on some passage migrant Anatids at the Lake Balaton

by
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Abstract: Census data of fifteen duck species and the Bean Goose (*Anser fabalis*) were collected in the Balaton area in 1986. Total number of the six most numerous duck species exceeded 37.000 specimens. The most numerous duck species with their peak numbers were the following: *Aythya fuligula* (27.483), *Aythya ferina* (8243), and *Anas platyrhynchos* (2787).
Key words: Anatidae, Lake Balaton, waterfowl census

Introduction

Knowledge of species composition, the changes and dynamics of waterfowl populations at the Lake Balaton got into the focus in the last few years in order to get better understanding on the ecological processes in the Lake. For this reason the publication of field data collected earlier could be useful.

Intense field studies were carried out in a five-year period on the passage migrant and wintering waterfowl populations of the lake in the 1980s. Field data arising from this period were only partly analysed (Bankovics 1985, 1988).

This study focuses on the passage migrants and wintering birds in 1986 autumn migration, that means 15 duck species and the Bean Goose.

Material and methods

Birds were censused monthly from a ship travelling around the Lake Balaton. One census was completed in two days. Zeiss Decarem 10x50 and Back Cassel 20x70 binoculars were used during the censuses.

Numbers of birds were registered according to the administrative districts of the 50 villages sharing the water surface of the Lake Balaton. This survey started in 1982, in order to give the first total waterfowl census on the whole water surface of Balaton. The earlier bird censuses covered only some parts of the Lake (Keve 1964, 1969).

The material elaborated here was collected during the autumn migration in September, October and November in 1986. In that period 15 duck and one goose species were studied. Numbers of the six most abundant duck species are shown in Table 2.

The Bean Goose was counted and estimated from the banks nearby their roosting places during the evening flight. Their numbers by roosting sites are shown on Figure 2.

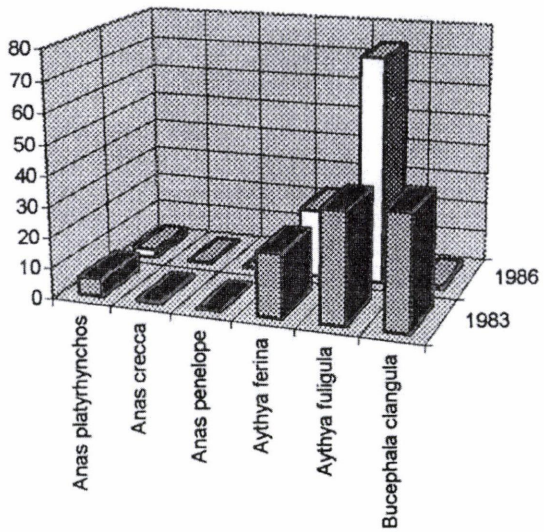

Figure 1. Percentage distribution of the most common duck species at the Lake Balaton in November 1983 and in November 1986.

Results and discussion

Altogether 24 Anatidae species were observed and counted between 1982-1986. Six of them can be considered as frequent species, the other nine species occured in small numbers and the other nine were rare (Table 1).

Total number of the six most abundant duck species grew from September to November consistently, from 869 individuals in September through the ten times higher value of 8922 individuals in October and to 37.212 individuals in November.

Species composition of waterfowl also changed in the course of the study period in a species specific manner. From this point of view four species have to be mentioned. The Mallard (*Anas platyrhynchos*) population after having a few hundred individuals (478) in September grew to a few thousand individuals (2787) by October, which then decreased to one-third (1021) size of the peak population by November.

On the contrary the Pochard (*Aythya ferina*) shows a continuous growing line from the 125 individuals in September, to the 8243 individuals in November. The other diving duck species, the Tufted Duck (*Aythya fuligula*) shows a much steeper growing line from the 264 individuals in September to the 27.483 population size in November.

The late autumn migrant Goldeneye (*Bucephala clangula)* shows a relatively low number (375) in November. Its number generally grows only at the end of November and by that time its population usually exceeds the Tufted Duck population (Table 2).

The percentage distributions of the different duck species are shown monthly also by Table 2. The Mallard has the highest share of it (55.01%) in September, it is followed by the Tufted Duck (30.38 %) and the Pochard (14,38 %).

The situation changed in October. The Pochard grew to 50.22 %, while the Mallard decreased to 31.24 %. The Tufted Duck also decreased to 18.53 %, even though its population grew.

Table 1. Grouping of Anatidae species based on quantitative data, censused at the Lake Balaton in the period 1982 and 1986

I. Most numerous species (above 1000 specimens)

Bean Goose	*Anser fabalis*
Mallard	*Anas platyrhynchos*
Teal	*Anas crecca*
Pochard	*Aythya ferina*
Tufted Duck	*Aythya fuligula*
Goldeneye	*Bucephala clangula*

II. Species occurring in small numbers generally between 51 and 1000, but regularly observed in the study period.

Mute Swan	*Cygnus olor*
Grey-lag Goose	*Anser anser*
White-fronted Goose	*Anser albifrons*
Garganey	*Anas querquedula*
Pintail	*Anas acuta*
Wigeon	*Anas penelope*
Gadwall	*Anas strepera*
Shoveler	*Anas clypeata*
Ferruginous Duck	*Aythya nyroca*

III. Rare and/or vagrant species, occurring in small numbers (1-50), observed not every-year in the study period.

Scaup	*Aythya marila*
Red-crested Pochard	*Netta rufina*
Long-tailed Duck	*Clangula hyemalis*
Velvet Scoter	*Melanitta fusca*
Common Scoter	*Melanitta nigra*
Eider	*Somateria mollissima*
Gooseander	*Mergus merganser*
Red-breasted Merganser	*Mergus serrator*
Smew	*Mergus albellus*

Table 2. Numbers and percentages of the six most numerous duck species censused at the Lake Balaton during autumn migration in 1986

Species	September		October		November	
	number	%	number	%	number	%
Anas platyrhynchos	**478**	55.01	**2787**	31.24	**1021**	2.74
Anas crecca	**0**	0.00	**1**	0.01	**48**	0.13
Anas penelope	**2**	0.23	**0**	0.00	**42**	0.11
Aythya ferina	**125**	14.38	**4481**	50.22	**8243**	22.15
Aythya fuligula	**264**	30.38	**1653**	18.53	**27483**	73.86
Bucephala clangula	**0**	0.00	**0**	0.00	**375**	1.01
Total	**869**	100.00	**8922**	100.00	**37212**	100.00

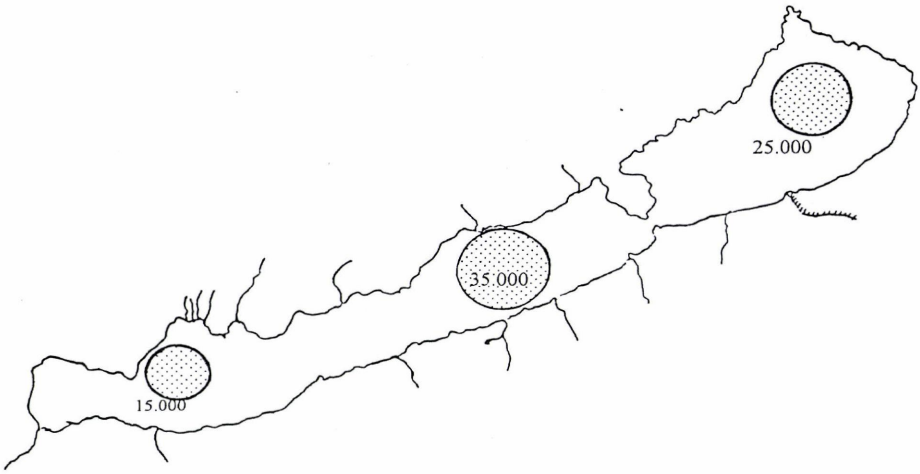

Figure 2. Survey map of he three most important roosting places of Bean Goose (*Anser fabalis*) at the Lake Balaton in November, 1986 (size of the wintering Bean Goose (*Anser fabalis*) population: ca. 75.000 individuals)

In November much more changes observed. The Tufted Duck contributed nearly three-quarter (73,86 %) of the whole duck population of the Lake Balaton. The proportion of the Pochard, in spite of its population growth, decreased to 22.15 %. The proportion of the Mallard fell to 2.74 % and the Goldeneye just appeared with 1.01 % by mid-November.

The situation of passage migration discussed above is valid only for this certain year, 1986. Generally, the migration shows a similar picture year by year, but with different population sizes depending on the food-supply of the Lake Balaton in each year. For example, Figure 1. shows the results of comparison of the November census data in percentages from years 1983 and 1986.

Order of magnitude of the Mallards was almost same in the two years (653 and 1021) respectively, but the number of Pochards was four times smaller (2336 and 8243), the Tufted Duck population even seven times smaller (4088 and 27483), and the Goldeneye population ten times higher (4235 and 375) at the first census.

The November census was carried out two weeks later in 1983 than in 1986. Thus, beside the weather conditions temporal dynamics might also have affected the population sizes. That is one of the possible reasons for the big differences of numbers of the Goldeneye and the Tufted Duck between the years 1983 and 1986.

The western part of the Pannonian Basin plays an important role as a wintering place for the Bean Goose. Beside the Danube and a few smaller lakes, the Lake Balaton is an important roosting site (Bankovics 1985, 1988). In the study period (1986) an estimation was carried out to calculate the number of wintering Bean Geese in November. That three main roosting sites were formed. The largest one was situated between the villages Zánka and Balatonszemes, including ca. 35.000 birds. The second largest roosting sites was placed in the eastern basin of the Lake, north from the town Siófok (ca.25.000 birds). The third one with 15.000 birds was located in the Szigliget Bay just southwest from the Tapolca basin (Fig. 2).

Rarer duck species (not mentioned in the discussion)

Most of the observations have already been published elsewere, therefore only data from the autumn migration of 1986 is shown here.

Gadwall (*Anas strepera*)
It occurred only on the 12th of October, in 1986. There were 4 specimens at Fonyód, and another 6 specimens at Balatonszemes.

Pintail (*Anas acuta*)
There is only one observation. Three specimens were observed west from the Tihany Peninsula on the 11th of October, in 1986.

Shoveler (*Anas clypeata*)
Six specimens were observed at Balatonkenese on the 15th of November, in 1986.

Ferruginous Duck (*Aythya nyroca*)
There were 20 specimens on the12th of September and 8 another in October. This species was absent in November.

Scaup (*Aythya marila*)
There were 16 specimens along the western shore of Tihany peninsula on the 11th of October, 1986, and 1 male with transitional plumage at Csopak on the 15th of November, 1986.

Long-tailed Duck (*Clangula hyemalis*)
There were two specimens (1 adult female and 1 immaturus) at Ábrahámhegy on the 16th of November, in 1986.

Velvet Scoter (*Melanitta fusca*)
There were 6 specimens on the 15th of November, in 1986: 1 specimen at Balatonkenese, 1 male and 1 female together at Balatonfűzfő and 3 specimens at Örvényes.

Smew (*Mergus albellus*)
Only one female was observed in autumn 1986 at Ábrahámhegy on the 16th of November.

Red-breasted Merganser (*Mergus serrator*)
One specimen was observed at Balatonfűzfő on the 11th October, in 1986, and another one at Badacsonytomaj on the 16th of November, in 1986.

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